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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,479	04/12/2006	Satoru Nishio	289353US3PCT	3427
22850	7590	10/31/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER DENTER, CLARK F				
ART UNIT		PAPER NUMBER		
3724				
NOTIFICATION DATE		DELIVERY MODE		
10/31/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/575,479

**Applicant(s)**

NISHIO ET AL.

**Examiner**

Clark F. Dexter

**Art Unit**

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 12 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/CI/CD)  
Paper No(s)/Mail Date 7/23/08  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The amendment filed on July 23, 2008 has been entered.

#### ***Information Disclosure Statement***

2. The information disclosure statement filed on July 23, 2008 has been entered and the references listed thereon have been considered.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 stand rejected under 35 U.S.C. 102(b) as being anticipated by Wittkopp, pn 5,182,976.

As stated in the previous Office action, Wittkopp clearly meets the claimed invention with structure that corresponds or substantially corresponds to that of the present invention. The following is a detailed explanation of one manner in which the prior art clearly meets the claimed invention.

Regarding claim 1, Wittkopp discloses a tool with every structural limitation of the claimed invention including:

a plurality of virtual regions so formed as to be surrounded by two radius lines extending from a rotation center of a disc-shaped base metal and two concentric circles on the base metal disposed around the rotation center is disposed continuously in a circumferential direction on the disk-shaped base metal while a single slit is provided in each one of virtual regions so as to make contact with all of the two radius lines and two concentric circles,

wherein a central angle formed by the two radius lines is equal to or less than  $90^\circ$  (e.g., as shown in Fig. 1A);

the virtual regions are 4 to 24 in number (e.g., 8 as shown in Fig. 1A);

the concentric circle located in a center of an interval of the two concentric circles forming the virtual region is in a range of  $0.6\ r$  to  $0.8\ r$  with respect to the rotation center of the base metal when a maximum gullet bottom radius of the base metal is  $r$  (e.g., Wittkopp teaches or suggests to one having ordinary skill in the art a ratio of about  $.63r$  as shown in Fig. 1A);

an overlapping of the virtual regions continuously adjoining each other is in a range of  $0^\circ$  to  $12^\circ$  in terms of the central angle around the rotation center (e.g.,  $0^\circ$  as shown in Fig. 1A);

a minimum neighborhood distance between the adjoining slits is equal to or more than  $0.05\ r$  (e.g., as clearly taught in Fig. 1A); and

a ratio of a length of an arc of the central concentric circle in the virtual region with respect to the interval of the two concentric circles in the virtual region is 3 to 6

(e.g., as clearly taught by Wittkopp, particularly in Fig. 1A, as further described in the "Response to Arguments" section below);

[claim 2] wherein the plurality of virtual regions has the same shape (e.g., as taught by Wittkopp, particularly in Fig. 1A);

[claim 3] wherein the slits formed in the plurality of virtual regions is of the same shape (e.g., as taught by Wittkopp, particularly in Fig. 1A).

### ***Response to Arguments***

5. Applicant's arguments filed July 23, 2008 have been fully considered but they are not persuasive.

In the second paragraph on page 7 of the subject response, applicant argues that:

"Even assuming *arguendo* that the figures of Wittkopp are to scale, the figures appear to show that a ratio of a length of an arc of the central concentric circle in the virtual region with respect to the interval of the two concentric circles in the virtual region is much greater than 3 to 6. In fact, as noted above, column 2, lines 31-33 of Wittkopp states that the disclosed saw blade includes a series of essentially radial beam segments."

The Examiner respectfully disagrees with applicant's analysis. It is respectfully submitted that the claims, particularly the subject limitation of the claims, when given their broadest, reasonable interpretation are more broad than applicant's interpretation. Upon review of the subject limitation:

"a ratio of a length of an arc of the central concentric circle in the virtual region with respect to the interval of the two concentric circles in the virtual region is 3 to 6,"

the claim(s) only requires that a ratio of an arc length with respect to the interval length, is 3 to 6. There is no specific requirement as to how the ratio is to be determined or how long the arc length must be. For example, there is clearly an arc length within the virtual region (i.e., a portion of the entire arc length within the virtual region) that is one third the length of the interval length. Thus, "a ratio" of an arc length with respect to the interval length could be either one-third or 3. Similarly, there is clearly an arc length within the virtual region that is one sixth the length of the interval length. Thus, "a ratio" of an arc length with respect to the interval length could be either one-sixth or 6.

Therefore, it is respectfully submitted that the prior art teaches and/or suggests the claimed invention and that the prior art rejection must be maintained.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clark F. Dexter whose telephone number is (571)272-4505. The examiner can normally be reached on Mondays, Tuesdays, Thursdays and Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on (571)272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Clark F. Dexter/  
Primary Examiner, Art Unit 3724**